

REMARKS

Claims 1-20 are pending in this application. Claims 2-20 are amended to conform to U.S. claim format, for example by (1) eliminating a multiple dependent claim, and (2) revising "characterized in that" to "wherein."

No new matter is added to the application by this Amendment. Support for the language added to claim 16 can be found within the specification at, for example, the last full paragraph on page 3.

Reconsideration of the application is respectfully requested.

I. Rejection Under 35 U.S.C. §102

Claims 1-15, 19 and 20 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,211,861 to Rosenberg et al. (hereinafter "Rosenberg"). The rejection is respectfully traversed.

The Patent Office alleges that Rosenberg teaches each and every feature recited in claims 1-15, 19 and 20. Applicant respectfully disagrees with this allegation.

Rosenberg fails to teach or suggest a control device with haptic feedback with at least one actuating element, at least one switching device and at least one positioning device, wherein the at least one actuating element includes at least one display device, and a force can be applied by the at least one positioning device to the at least one actuating element as required by claim 1.

Rosenberg teaches that a host computer may have its own host frame which is displayed on the display screen of the host computer and a mouse having its own workspace or local frame in which the mouse is moved (see FIG. 1 and col. 5, lines 24-27 of Rosenberg). Rosenberg also discloses that tactile sensations are generated by a

motor (or other actuator) having a rotating shaft, where an inertial mass is connected to the shaft at an off-center point of the mass such that the inertial mass is rotated around the motor shaft with respect to the interface device at various speeds (see col. 6, lines 19-22 of Rosenberg).

Applicant submits that Rosenberg requires an inertial force of a massive element, which is driven by one electrical actuator, such as, a motor to create a mechanically sensible feedback action in form of "tactile sensations". The active creation of these tactile sensations is generated by consumption of electrical power through an electrical machine, such as, a linear or rotary electrical motor. Further, the active creation of these tactile sensations is not made directly from the electrical driving element to the housing of the mouse or to the hand and/or fingers of the user. But instead, these tactile sensations are made indirectly through the inertial force of the massive element driven by one electrical actuator.

Rosenberg further discloses use of different kinds of mechanical movement, such as, vibrations, pulses and the like to active create the tactile sensations. Still further, Rosenberg's device gives a haptic response to the user after an event has happened on the screen via the housing of the mouse. To the contrary, the present application utilizes a completely different feature and/or environment to produce a haptic feedback to the hand and/or fingers of the user.

As shown in FIGS. 1a and 1b of the present application, a user pushes an actuating element 12 as an example on four different areas 20 (see Fig. 2 of the present application) of the actuating element 12. The user's pushing of the actuating element 12 at one of the four different areas 20 causes one of the four switching devices 14 to

be pushed, through the actuating element 12, until one of the four switching devices 14 electrically switches to produce a corresponding signal. Moreover, contrary to the display screen of Rosenberg's host computer, the actuating element 12 of the presently claimed control device includes at least one display device as required in claim 1 and shown in Fig. 2 of the present application.

With the control device of the present application, each of the switching devices 14 has a resilient element (not shown in the drawings of the present application) to return the switching devices 14 to a neutral position when no pushing force is applied to it by the user's finger through actuating element 12. Additionally, the user of the presently claimed control device feels the exactly resistance force of the resilient element of a switching device 14 when the user pushes the display area 20 corresponding to the switching device 14. As a result, the user of the presently claimed control device feels haptic feedback, such as, a mechanical click of the corresponding switching device 14.

Contrary to the device of Rosenberg, no electrical power and no electrical machine, such as a motor are used, in any form, to produce the haptic feedback of the presently claimed control device. Moreover, each display area 20 of the display device 18 of the actuating element 12 corresponds to one of the switching devices 14. In contrast, Rosenberg does not teach that the mouse device includes any such display screen or the like. Instead, as discussed above, Rosenberg discloses that only the host computer has a display screen. Thus, Rosenberg's user has to look at the display screen of the host computer as usual, and additionally the user has the mouse in the hand or under the finger of the user. As a result, Rosenberg's user does not have any look at the mouse itself. However, even looking at Rosenberg's mouse would be

undesirable as it may prevent the user from viewing important information shown on the display screen of the host computer.

In the Office Action, the Patent Office alleges that Rosenberg teaches that the actuator 18 of force feedback mouse is coupled to the display device 26 of the host computer system as shown in FIG. 4 of Rosenberg. However, nowhere does Patent Office allege that the actuator 18 includes the display device 26 as recited in claim 1 of the present application because the actuator 18 of Rosenberg is located within the force feedback mouse, while the display device 26 is located in a separate and remote host computer system. The actuator 18 of the force feedback mouse in accordance with Rosenberg is incapable of including the display device 26 of the host computer system. Thus, Rosenberg fails to disclose that the at least one actuating element (12) includes at least one display device (18) as required in claim 1.

Further, the presently claimed control device provides a feedback response to the hand and/or finger of the user in order to ensure the user that a desired function is effectively switched by the user actually manipulating the display device 18 of the actuating element 12 itself. Previous devices using a touch screen function do not provide the claimed haptic feedback to ensure the user that the desired function has been effectively switched or selected.

The present application includes uses of the presently claimed control device in a computer environment for different transport or control systems (see the third full paragraph on page 5 of the present application). However, these uses of the present claimed control device do not include that one manipulation device (i.e., the force feedback mouse) is separated from the display device (i.e., the host computer system) as

disclosed by Rosenberg. With that said, it is clear that Rosenberg fails to (1) teach or suggest the required features of the control device recited in claim 1 and (2) address the problems set forth in the present application.

Because the features of independent claim 1 are neither taught nor suggested by Rosenberg, Rosenberg cannot anticipate, and would not have rendered obvious, the features specifically defined in claim 1 and its dependent claims.

For at least these reasons, claims 1-20 are patentably distinct from and/or non-obvious in view of Rosenberg. Reconsideration and withdrawal of the rejections of the claims under 35 U.S.C. §102(b) are respectfully requested.

II. Rejection Under 35 U.S.C. §103

Claims 16-18 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Rosenberg in view of U.S. Patent No. 6,337,678 to Fish. The rejection is respectfully traversed.

Fish does not remedy the deficiencies of Rosenberg as described above with respect to claims 1 and 6, from which claims 16-18 depend.

Rosenberg fails to teach or suggest a touch screen as acknowledged by the Patent Office (see page 5 of the Office Action). The Patent Office introduces Fish as allegedly teaching that an XY cable 118 is provided to couple XY sensor 116 to an XY interface and that the XY sensor 116 may be implemented using a four wire resistive film touch screen. Nowhere does Fish disclose an actuator having display and a positioning device that applies a force to an actuator.

As discussed with respect to claim 1, Rosenberg does not teach or suggest that at least one actuating element includes at least one display device, and that a force can

be applied by the at least one positioning device to the at least one actuating element. Fish fails to remedy the deficiencies of Rosenberg because Fish does not teach or suggest an actuating element having a display device and a positioning device capable of applying a force to the actuating element.

Thus, neither Rosenberg nor Fish, taken singly or in combination, teaches or suggests a control device having at least one actuating element that includes at least one display device, and that a force can be applied by the at least one positioning device to the at least one actuating element as required by claim 1.

Because these features of independent claim 1 are not taught or suggested by Rosenberg and Fish, taken singly or in combination, Rosenberg and Fish would not have rendered the features of claim 1 obvious to one of ordinary skill in the art.

For at least these reasons, claims 16-18 are patentable over Rosenberg and Fish. Thus, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Early and favorable action is earnestly solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicant respectfully requests that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,
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